

REMARKS

Please reconsider the present application in view of the above amendments and the following remarks. Applicant thanks the Examiner for indicating that claims 7-9 contain allowable subject matter and that claims 10-12 would be allowable if rewritten to overcome the rejection under 35 U.S.C. §112, which is addressed below.

Disposition of Claims

Claims 1-12 were pending in this application. By way of this reply, claims 3-6 have been canceled without prejudice or disclaimer. Accordingly, claims 1, 2, and 7-12 are now pending in this application. Claims 1 and 2 are independent. The remaining claims depend, directly or indirectly, from the independent claims.

Amendments to the Claims

Claims 1, 2, 7, and 9-12 have been amended by way of this reply. Claims 1 and 2 have been amended to include the limitations of canceled claims 3-6 and to recite "the plurality of multiaxial sensor units being disposed on a same plane." Claims 7 and 9-12 have been amended to depend from amended claim 1. Claim 10 has been amended to specify the number and positions of the strain gauges. Claim 12 has been amended to delete the phrase, "the multiaxial sensor units and" to clarify that the limitation does not provide additional sensor units. No new matter has been added by way of the amendments.

Objections to the Drawings

The Examiner objected to the drawings because Figs. 21, 22, and 23A-C were not designated by a “Prior Art” label. Figs. 21, 22, and 23A-C have been amended with a “Prior Art” label. No new matter has been added by the amendments. Accordingly, withdrawal of the objection is respectfully requested.

Rejections under 35 U.S.C. §112

Claims 10-12 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Specifically, the Examiner points out that there is insufficient antecedent basis for the limitations “the strain gauges” (claim 10 line 2; claim 11 line 3), “the diaphragm” (claim 10 line 4), “the force receiving portion” (claim 12 line 3), and “the multiaxial sensor units” (claim 12 line 2).

As explained above, claims 10-12 have been amended to depend from amended claim 1. All the above limitations have antecedent basis in amended claim 1. Claim 10 has been further amended to clarify that the “strain gauges” are “eight strain gauges of the multiaxial sensor unit,” and that the strain gauges are disposed “at four positions” on outer and inner edges of the diaphragm. Claim 12 has been further amended to delete the phrase “the multiaxial sensor units and” to clarify that the limitation does not provide additional sensor units. All limitations now provide proper antecedent basis. Accordingly, withdrawal of this rejection is respectfully requested.

Rejections under 35 U.S.C. §102(b)

Claims 1 and 3 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,915,015 (“Crane”). Claim 3 has been canceled by way of this reply. Accordingly, this rejection is now moot with respect to claim 3. To the extent this rejection still applies to amended claim 1, the rejection is respectfully traversed.

As explained above, claim 1 has been amended to include all the limitations of canceled claims 3-6 and the limitation “the plurality of multiaxial sensor units being disposed on a same plane.” MPEP § 2131 makes clear that a claim is anticipated only if each and every element as set forth in the claim is found either expressly or inherently in a single prior art reference. In light of the above amendments, Applicant respectfully asserts that Crane does not show or suggest all the limitations of amended claim 1. For example, Crane does not disclose at least the limitations that “each of the strain gauges is a piezoresistive element or a strain gauge formed by sputtering,” “a multiaxial sensor comprises a plurality of multiaxial sensor units,” and “the multiaxial sensor units are disposed around a center point of the multiaxial sensor at regular angular intervals at the same distance from the center point.” Accordingly, withdrawal of this rejection is respectfully requested.

Claims 1 and 5 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,339,696 (“Carignan”). Claim 5 has been canceled by way of this reply. Accordingly, this rejection is now moot with respect to claim 5. To the extent this rejection still applies to amended claim 1, the rejection is respectfully traversed.

As explained above, claim 1 has been amended to include all the limitations of claims 3-6 and the limitation “the plurality of multiaxial sensor units being disposed on a same plane.” In light of these amendments, Applicant respectfully asserts that Carignan does not show or suggest all the limitations of amended claim 1. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 1 and 4-6 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,408,112 (“Tai”). Claims 4-6 have been canceled by way of this reply. Accordingly, this rejection is now moot with respect to claims 4-6. To the extent this rejection still applies to amended claim 1, the rejection is respectfully traversed.

As explained above, claim 1 has been amended to include all the limitations of claims 3-6 and the limitation “the plurality of multiaxial sensor units being disposed on a same plane.” In light of these amendments, Applicant respectfully asserts that Tai does not show or suggest all the limitations of amended claim 1. Accordingly, withdrawal of this rejection is respectfully requested.

Finally, claim 2 stands rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,745,812 (“Amazeen”). For the reasons set forth below, the rejection is respectfully traversed.

The Examiner asserts that Amazeen teaches a sensing apparatus comprising eight strain gauges disposed on a single plane and two bridge circuits constructed by connecting the strain gauges. As explained above, however, claim 2 (like claim 1) has been amended to include all the limitations of canceled claims 3-6 and the limitation “the plurality of multiaxial sensor units being

disposed on a same plane.” In light of these amendments, Applicant respectfully asserts that Amazeen does not show or suggest all the limitations of amended claim 2. Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 07700/072001).

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Respectfully submitted,

By


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Attachments: Replacement Drawings (Figs. 21, 22, and 23 A-C, 3 sheets)